



# Ruby-throated Hummingbirds

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in Missouri





*The ruby-throated hummingbird is one of the most fascinating birds in Missouri. The widespread appeal of these tiny birds lies in their shimmering, iridescent plumage, their darting, hovering flight and their bold, pugnacious behavior.*

*To early European settlers in the New World, hummingbirds were especially noteworthy because they occur only in the Western Hemisphere. The majority of the 320 species of hummingbirds live in the Central and South American tropics. About two dozen species range into the western United States. Primarily only one, the ruby-throated hummingbird, lives east of the Rockies. It is the only hummingbird to nest in Missouri.*



*male hummingbird*



*female hummingbird*



*immature male hummingbird*

## Description

The ruby-throated hummingbird (*Archilochus colubris*) is by far Missouri's smallest bird. By comparison, the kinglet, the state's next smallest bird, weighs twice as much. The name "ruby-throated" is derived from the adult male's crimson throat feathers, or gorget, which he uses to attract females and for territorial defense. Females and immature males have white throats with gray flecks. All ruby-throated hummingbirds have emerald-green backs, wings and tails and are white below. The iridescence of the plumage causes the birds to appear different shades of color depending on the angle of light.

There are certain large moths that may, at first glance, be confused with hummingbirds.

## Hummingbird facts

Of Missouri birds, chimney swifts are the closest relatives of hummingbirds. Hummingbirds can live up to nine years.

Length: 3 inches  
Weight: 1/8 ounce

Wingbeats: 75 per second  
Flight speed: up to 60 mph

## Flight

The hummingbird's rapid wingbeat enables it to move forward, backward, upward and downward as it hovers in a vertical position and maneuvers from flower to flower to feed on nectar. Hummingbirds can do this because of their strong wing muscles, which are proportionately larger than those of any other bird species. The rapid movement of hummingbird wings makes a low, buzzing sound, which contributes to the bird's name. During aggressive encounters, males emit a higher-pitched, louder hum than females.



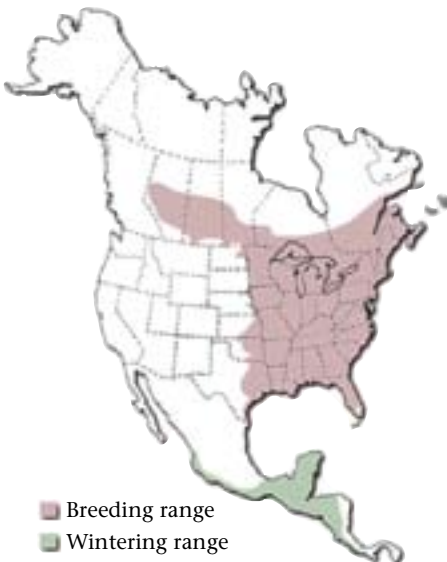
Ruby-throated hummingbirds also produce rapid squeals and chirps, used especially as threats.

## Where to find them

In summer, ruby-throated hummingbirds breed throughout approximately the eastern half of the U.S. and southern Canada. In Missouri, the breeding habitat of ruby-throated hummingbirds is mixed woodlands and deciduous forest. They can also be found in woodland edges, gardens and orchards. They commonly nest along streams and lake shores; nests are often on tree branches high over the water. They winter from Mexico to Panama and occasionally the southern tip of Florida.

## Spring migration

Ruby-throats that winter on the east coast of Central America are believed to fly north non-stop across the Gulf of Mexico, a 500-mile journey that can reduce the bird's body weight by half. Many also follow the coastline. They begin arriving on the Gulf Coast of the U.S. in late February. Continuing northward, some ruby-throats arrive in Missouri



*Map courtesy of The Birds of North America*

from mid- to late April, but most arrive in May. Males precede females by 8 to 10 days, perhaps to establish nesting territories and to identify food sources before the females arrive.

## Fall migration

People see the most ruby-throats in Missouri from August to late September. During this period, the birds tend to linger at feeders as they migrate southward. There are more hummingbirds during this season because the summer's new, young birds have been added to the population.

As the fall weather cools, semiconscious hummingbirds may be found on branches, window sills or in garages. If they are picked up, the warmth of the



*Spring Migration Map*

hand is usually enough to revive them, and they buzz off in perfect health. These birds are exhibiting a behavior akin to hibernation. On cold nights, their body temperature will drop as much as 20 degrees. This is probably an adaptation to conserve energy because of the hummingbirds' high metabolic rate.

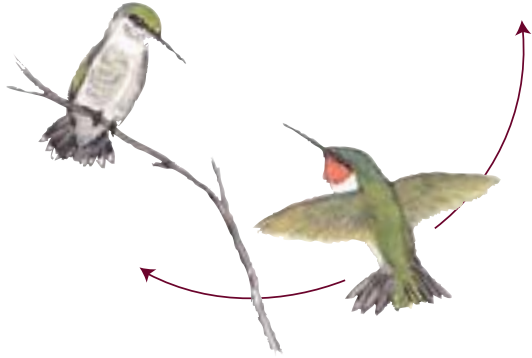


## Migration myth

Tales suggesting that hummingbirds hitch a ride on the backs of migrating geese and buzzards are groundless—especially considering that they migrate at different times, to different places and that the hummingbird is fully capable of making its own flight.

## Courtship

Male and female hummingbirds do not form a pair bond; males and females remain together only for courtship and mating. When a female enters a breeding male's territory, a male ruby-throat will begin a "dive display": a U-shaped looping



flight, starting as high as 12 to 15 feet above the female.



## Nests, eggs and young

The female ruby-throat begins nest building upon arrival at breeding grounds. Females alone select and construct nests, usually 15 to 20 feet above the ground near the tip of a down-sloping branch with a leaf canopy above it.

The nest is about the size of a walnut (1 to 1 3/4 inches across and 1 to 2 inches high). Adorned with lichens, spider webs and plant fluff, it is difficult to tell from a knot on the top of a limb. The two white eggs, which are no bigger than peanuts, hatch 12 to 14 days after being laid. The young fledge in 18 to 20 days. The female alone performs incubation and rearing.

## Feeding behavior

The hummingbird's rapid wing beat is an adaptation to use the same food sources as bees, butterflies and moths—the carbohydrate-rich nectar of flowers. Rarely alighting on plants, hummingbirds hover in front of flowers and probe their long bills deep into flower centers, exchanging pollen from flower to flower, pollinating plants as they feed on nectar. Ruby-throats also take insects and small spiders, especially when feeding young during the nesting season. Hummingbirds find most insects and spiders in blossoms, but they also catch them while flying—a behavior known as “hawking.” Hummingbirds that arrive in spring before many flowers are blooming will feed on the tree sap that wells up in holes excavated by yellow-bellied sapsuckers.



## Hummingbirds and trumpet creeper

At least one plant species in North America—trumpet creeper (*Campsis radicans*), a woodland vine—is thought to have coevolved with the hummingbird; it depends upon ruby-throats to pollinate its flowers.

(Bertin, 1982). The hummingbird's long, probe-like bill is especially adept at extracting nectar from the long tubular structure of this common, orange flower.

Studies have found that ruby-throats deposit 10 times as much pollen when visiting trumpet creeper flowers as do bumble bees and honey bees. Trumpet creeper plants frequently visited by hummingbirds also set more seeds than do trumpet creeper plants with other pollinators.

## Inviting them to your yard

You can enjoy hummingbird visitors by providing food sources for them in your yard or garden.

### *Gardening to attract hummingbirds*

Plants should be an important part of anyone's plan to attract hummingbirds. In addition to providing insects, flowers supply hummers with the nutrient-rich nectar that can provide up to 90 percent of their diet. Many of the plants that attract ruby-throated hummingbirds have red or orange tubular flowers.



*Hummingbird at a red buckeye tree.*

### Missouri native plants:

- ✿ cardinal flower
- ✿ jewelweed or touch-me-not
- ✿ royal catchfly
- ✿ fire pink
- ✿ wild bergamot
- ✿ trumpet creeper
- ✿ native honeysuckles  
(*Lonicera dioica*, *L. flava*,  
*L. prolifera*)
- ✿ red buckeye (a small tree)
- ✿ columbine

### Non-native and cultivated plants:

- ✿ mimosa
- ✿ cardinal vine
- ✿ snapdragon
- ✿ salvia
- ✿ begonia
- ✿ beebalm
- ✿ petunia
- ✿ nasturtium
- ✿ hollyhock
- ✿ gladiola
- ✿ geranium





### *Hummingbird feeders*

One simple way to attract ruby-throats is to build or buy a hummingbird feeder and fill it with a nectar solution. Providing a complete diet in your feeder is not essential, because the birds will balance their diets on their own. Locate the feeder where you can see it from inside your house. If you have many competing hummingbird “customers,” consider placing additional feeders in different parts of your yard.

### *Buying feeders*

When shopping for a feeder, consider those with bee or wasp guards, which are plastic mesh covers that prevent insects from

reaching the nectar. Sometimes the guards can be purchased separately. Ants sometimes find their way to the nectar. Coating the string supporting the feeder with petroleum jelly can discourage them.

### *Make your own feeders*

Constructing a feeder can be an easy task. An empty pint milk carton can become a makeshift feeder. Cut large openings in all four sides, leaving an inch reservoir at the bottom for nectar. Attach bright red material to the bottom of the carton to attract the birds. A glass of solution with a red ribbon around it also may work.

### *Making “nectar”*

A mixture of sugar and water—four parts water to one part sugar—makes a good nectar. Because most hummingbird feeders are red, there is no need to add red food coloring to the nectar. Be sure to clean the feeder very well to reduce the growth of bacteria. Change the nectar weekly, or more often if it becomes cloudy.

### *When to put out feeders*

The best time to put up hummingbird feeders in Missouri is around April 25, when ruby-throats return to Missouri. If you start feeding when they arrive, there is less chance of them moving on.

### *When to take feeders down*

Hummingbird feeding is most successful in late summer and

early fall. Some people fear that feeding hummingbirds into the fall may delay their departure and expose them to freezing. There is no evidence that feeding retards their migration. September is typically the most satisfying month to feed hummingbirds. As the nights become regularly cold, ruby-throats begin to migrate south. This occurs in Missouri in late September, and by October 10 the ruby-throats are usually gone. That's a good time to bring in the feeders and clean them for winter storage.

### *Other users of feeders*

Baltimore orioles, house finches, tanagers and woodpeckers will sometimes use hummingbird feeders.

## **Cautions**

Honey-water is often recommended because it has a higher nutrient content than sugar-water. There are great dangers in using honey, however. If the solution is not boiled and the feeder not cleaned each time before filling, a fungus that will attack the bird's tongue can grow in the mix.

Never use artificial sweeteners in hummingbird feeders.

## Other hummingbirds

Rarely, hummingbirds other than ruby-throats are seen in Missouri. The rufous hummingbird normally breeds from the Rocky Mountains to the West Coast. A few winter along the Gulf Coast, and they are most often sighted in Missouri as they pass through during migration from late summer to early winter. Other hummingbirds recorded in Missouri include the Anna's and green violet-ear. To attract hardy species such as the rufous and Anna's, try leaving out feeders and maintaining them beyond early October. Other hummingbirds possible in Missouri are: magnificent, blue-throated, broad-billed, broad-tailed, Allen's, calliope and black-chinned. Identification of these hummingbirds is usually extremely



*Immature male rufous hummingbird*

difficult because most are in subdued or immature plumage. If you think you have seen an unusual hummingbird, contact an expert. Remember that sphinx moths often are mistaken for hummingbirds.

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## For more information

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Schneck, Marcus. 1993.  
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Grow Native!  
[www.grownative.org](http://www.grownative.org)

*Reference: Bertin, R.I. 1982. Floral Biology, hummingbird pollination and fruit production in trumpet creeper (Campsis radicans). Am J. Bot. 69:122-134.*



*A female ruby-throated hummingbird samples nectar from a feeder.*

Written and edited by: James D. Wilson and Carol Davit

Designed by: Julie Tallent

Artwork by: James D. Wilson

Photos by: Jim Rathert

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